SAN FRANCISCO PUBLIC LIBRARY
3 1223 07274 4619

GOLDEN GATE PARK COMPREHENSIVE TRANSPORTATION STUDY

DOCUMENTS DEPT.
OCT 4 1983
SAN FRANCISCO
PUBLIC LIBRARY

SAN FRANCISCO
RECREATION AND PARK
TMENT

5/S

ancisco Public Library

ernment Information Center
Francisco Public Library
Larkin Street, 5th Floor
Francisco, CA 94102

ERENCE BOOK

e taken from the Library

PORTATION PLAN -
POSAL FOR
N REVIEW

ON ASSOCIATES, INC.
CALLISTER ST.
SAN FRANCISCO, CA

SEPTEMBER 1983

D

REF
388.4097
Sa52gt

GOLDEN GATE PARK COMPREHENSIVE TRANSPORTATION STUDY

DOCUMENTS DEPT.
OCT 4 1983
SAN FRANCISCO
PUBLIC LIBRARY

SAN FRANCISCO
RECREATION AND PARK
DEPARTMENT

DRAFT
TRANSPORTATION PLAN - A PROPOSAL FOR CITIZEN REVIEW

JEFFERSON ASSOCIATES, INC.
683 MCALLISTER ST.
SAN FRANCISCO, CA

SEPTEMBER 1983

GOLDEN GATE PARK COMPREHENSIVE TRANSPORTATION STUDY

SAN FRANCISCO
RECREATION AND PARK
DEPARTMENT

DRAFT
TRANSPORTATION PLAN - A PROPOSAL FOR CITIZEN REVIEW

JEFFERSON ASSOCIATES, INC.
683 MCALLISTER ST.
SAN FRANCISCO, CA

SEPTEMBER 1983

TABLE OF CONTENTS

Page

Introduction 1

Summary of Phase I 2

- Traffic Circulation Overview 2
- Origin/Destination Survey 3
- Parking 4
- Public Transit Service 5
- Shuttle Bus Feasibility 5

Selection of a Preferred Alternative 6

Refinement of the Preferred Alternative 6

Phasing of the Draft Transportation Plan 7

Characteristics of the Draft Transportation Plan 7

Actions in the Draft Transportation Plan 9

TABLES

1. Cost Summary of the Draft Transportation Plan 10

FIGURES

1. Draft Transportation Plan (Pull-Out)

APPENDIX

A. Safety Improvement Program 23

GOLDEN GATE PARK COMPREHENSIVE TRANSPORTATION STUDY

DRAFT TRANSPORTATION PLAN

INTRODUCTION

Golden Gate Park is widely recognized as one of the great urban parks in the country. The Park's 1,013 acres provide numerous cultural institutions, recreational activity centers, open space, and landscaped greenery, that enrich urban life and ease its pressures. The popularity of the Park results in regular heavy use virtually every day of the week by a diverse mix of city residents, residents of the greater San Francisco Bay Area, and domestic and international visitors. The attractive qualities which make Golden Gate Park unique have unfortunately also resulted in problems due to heavy use, such as damaged park grounds, and traffic and parking congestion.

Golden Gate Park is under the jurisdiction of the San Francisco Recreation and Park Commission. In 1979, the Park Master Plan Statement of Objectives and Policies was adopted by the Commission to establish guidelines for use, preservation and enhancement of Golden Gate Park. A major objective of The Plan for Golden Gate Park is to minimize vehicular traffic. Problems associated with traffic threaten to undermine the recreational and natural characteristics of the Park, diminishing the qualities of the Park experience.

The transportation system consists of nearly fifteen miles of roadway, and parking for up to 5,000 cars. During peak summer weekend periods or special events, the large volumes of auto traffic have resulted in safety conflicts with other travel modes such as bicycles, joggers, and walkers; environmental impacts such as noise, exhaust fumes, and damaged park grounds due to illegal parking; and visual clutter of park views from traffic and parked vehicles. During non-peak periods, such as average weekdays, considerably high volumes of through Park traffic from traffic generators such as the University of California San Francisco, Saint Mary's Hospital, and the Sunset and Richmond districts regularly pass through the Park.

In 1981, the San Francisco Public Utilities Commission obtained assistance from the Metropolitan Transportation Commission to fund a Comprehensive Transportation Study for Golden Gate Park. The goal of this study was to integrate the transportation policies of the Park Master Plan into a Transportation Plan that would address the most pressing transportation problems affecting Golden Gate Park. To accomplish this goal, the study was divided into two phases:

- Phase I: A comprehensive data collection effort to document existing transportation patterns (completed in July 1982)
- Phase II: Development of sets of transportation plan alternatives for review by the general public and the Recreation and Park Commission, and eventual adoption as the Transportation Plan for Golden Gate Park in December 1983.

This report contains a Summary of the Phase I work, and presents a Draft Transportation Plan for public review and comment. An appendix containing a summary of comments on the draft transportation plan alternatives is available under separate cover from the Recreation and Park Department. Interested readers are encouraged to obtain these and other background studies as needed.

SUMMARY OF PHASE I

Phase I of the Golden Gate Comprehensive Transportation Study compiled and evaluated background data on Park transportation conditions. Five background studies were undertaken:

- an assessment of traffic circulation patterns
- an origin/destination study of park users
- an evaluation of parking supply, demand, and occupancy
- an assessment of existing and projected public transit service
- a shuttle bus feasibility study.

The results of these studies are summarized in the following sections.

TRAFFIC CIRCULATION OVERVIEW

Since 1971, twenty-four hour weekday traffic volumes have increased approximately 20% from 126,000 to 152,000 vehicles per day. State Highway 1, from 19th Avenue to Park Presidio By-Pass, is the most heavily travelled roadway within the Park. North-south traffic totals approximately 105,000 vehicles per day, of which 54% is carried on the State Highway. The remainder of north-south traffic is carried mostly on Kezar Drive and Chain of Lakes Drive East. Total east-west traffic is approximately 46,000 vehicles per day, and occurs primarily on John F. Kennedy and South Drives.

Levels of service for the great majority of the weekday period is high (level of service B or higher) indicating a free flow traffic condition with little or no congestion.[1] During the weekday commute periods of 7:30-8:30 a.m. and 4:00-5:00 p.m., traffic volumes increase on sections of John F. Kennedy Drive and South Drive due to commute traffic.

Weekend levels of service for most Park roads are Level C or better (average traffic delays) for most of the weekend with the exception of the hours of 12:00 noon to 4:00 p.m. During this period, traffic congestion can develop on major roads such as John F. Kennedy Drive between Conservatory Drive West and Kezar Drive, and South Drive near the 9th Avenue and Crossover Drive exits. The principal causes of traffic congestion are the volumes of vehicle traffic entering and exiting from the Park; high volumes of pedestrian cross traffic at major activity centers; and drivers engaged in parking maneuvers.

The high volumes of auto traffic and excessive speeds have resulted in numerous accidents between autos, and occasionally pedestrians and bicyclists. During the six-year period of 1976 - 1981, the locations with the highest accident frequencies are on major arterials such as Kezar Drive at Waller Street and Park Presidio By-Pass (State Highway 1) at Crossover Drive. The predominant causes of accidents within the Park are excessive speed; excessive speed for existing conditions; inattention to control signs (such as STOP signs); improper passing, turning, and parking movements; and accidents caused by avoidance of pedestrians and bicyclists. Six traffic fatalities were recorded on park roadways in the six year period, excluding State Highway 1 (Park Presidio By-Pass). The locations within the Park with the highest percentage injury accidents are Chain of Lakes Drive East at Kennedy Drive; Middle Drive West at Transverse Drive; and Chain of Lakes Drive East at South Drive.

Predominance of the private automobile for transport to and within the Park has also resulted in safety conflicts with pedestrians and bicyclists; vehicle accidents on major park roads; and traffic congestion during peak use periods such as weekends, and holidays/special events. Further, weekday circulation patterns differ markedly from that of the weekend. Weekday traffic levels are low, with the exception of commute traffic occurring during peak periods.

ORIGIN/DESTINATION SURVEY

Three surveys were conducted in Phase I by the San Francisco Recreation and Park Department to obtain data on travel patterns of park users. The survey effort consisted of a Parkwide direct interview origin/destination survey; a windshield parking survey; and a car stop survey at key access roadways. Key findings of the origin/destination surveys are as follows:

---

[1] Level of service is a broad measure of the effect of traffic flow factors such as traffic volume and speed, on a given roadway section or intersection.

- Seventy-one percent of Park users come from locations within the City of San Francisco. Of these total San Francisco residents, 45% reported final trip destinations in the Richmond, Sunset and Panhandle neighborhoods.
- Forty percent of respondents stated their primary activity purpose as walking/sightseeing, followed by running/jogging with 13%, and picnicking and sports, each with 12%.
- Primary destinations within the Park include the Museums with 32% of respondents, followed by other activities with 17%, the Academy of Sciences with 16%, and trails and meadows with 12 and 10%, respectively.
- Transportation mode choice revealed 61% of respondents travelled by automobile, 21% walked, 8% arrived by public transit, and 6% travelled by bicycle.

Although a majority of the park users come from locations within San Francisco, these users still rely heavily on the automobile for access to and within Golden Gate Park. This pattern is further reflected in the comparatively low (8%) public transit usage.

Once users are within the Park, nearly 50% of the respondents reported the Museum and Academy of Science as their primary destination. Also, roughly 50% of the respondents reported walking/sightseeing or jogging as their primary purpose for visiting the Park.

PARKING

Golden Gate Park has approximately 5,000 parking spaces along roadways within the Park and in parking lots scattered throughout the Park. The heaviest parking occurs in the East Park along Kennedy Drive, South Drive, Middle Drive East, and within the Museum/Concourse. In the West Park, the Riding Academy, Polo Field, and Soccer Field lots experience the heaviest parking use. Parking demand often exceeds the supply of spaces in these areas during weekends. This results in delays in finding parking, traffic congestion, and occasional spillover parking on neighborhood streets. On summer weekends, it is estimated that up to 300 vehicles may park on neighborhoood streets.

In response to a Park user survey, 50% of the respondents felt there were areas in or adjacent to the Park where parking is a problem. The main parking problem identified is finding spaces. The majority of people responding to the park-wide direct interview survey agreed that parking along roadways in the Park should be lessened and diverted to parking lots; however, a majority also were against developing new parking lots in the Park. Instead, more use of existing, underutilized lots was preferred by the survey respondents. The use of lots to lessen parking demand in congested areas was opposed by the majority of people surveyed. A majority of people surveyed also supported a parking ban on selected park roads. If parking availability was restricted within the Park, 25% of the respondents said they would park in areas next to the Park, and walk to their park destination.

PUBLIC TRANSIT SERVICE

Public transit service to the vicinity of Golden Gate Park is provided by 11 Muni transit lines. Direct service to facilities within the Park from a variety of areas within the City is, however, limited. Of the 11 transit lines, only the 44-O'Shaughnessy with direct service to the museums and Academy of Sciences stops within the Park. The 10 other transit lines stop along roads on the perimeter of the Park.

Public transit was used to travel to Golden Gate Park by 8% of the people responding to the Park user survey. When asked how often public transit would be used to travel to the Museum and Academy of Science if convenient transit service were available from near their home, 73% of the respondents responded that they would use transit often or always. Only 14% responded that they would never or rarely use transit to travel from their home to the Concourse area.

The Muni Five Year Plan recommends several route changes that would affect transit service to Golden Gate Park. Recommendations are made to reduce the hours of operation of the 7-Haight line, extend the 17-Park Merced line through the Park and add a 73-Lincoln Way line along the south side of the Park, extend the 33-Ashbury line to Arguello Blvd., and re-route the 71-Haight Noriega line to Ninth Aveue. A shortage of direct transit service to Park facilities will still exist if the recommended line changes are carried out.

SHUTTLE BUS FEASIBILITY

One option evaluated to help reduce Park traffic and parking congestion was a shuttle bus system for park users. Three initial options for weekend shuttle systems were evaluated in conjunction with potential parking restraint options. A small East Park shuttle operating between Kezar Stadium and the Museum/Concourse would provide transport between an accessible parking area at Kezar Stadium, and the Museum, Academy of Sciences, and Tea Garden in the Concourse area. An expanded route option, a Medium Shuttle, in the East Park would serve Stow Lake in addition to the Kezar Stadium and Museum/Concourse areas. A Park-wide Shuttle would serve the major activity centers in both the east and west Park.

Results from the park surveys indicated that 21% to 33% of the people surveyed would use a frequently operating shuttle when accompanied by parking restraints within the park. Based on shuttle operations elsewhere in the United States, a more realistic and conservative estimate of demand is 10% to 15 % of park visitors arriving by auto.

Studies were made of using the San Francisco Muni, the Recreation and Park Department, a Park Association, a private contractor, or jitneys to operate a shuttle service. All of the operation scenarios had varying advantages and disadvantages with respect to operating costs, insurance requirements, types of vehicles and feasibility of implementation.

The use of jitneys appear most promising for a demonstration program for summer and weekend service. Jitney vans could operate on routes specified by the Park, collect and keep fares, and present no financial changes to the Park. To induce ridership, visitors parked at Kezar Stadium could be allowed to ride the shuttle for free if jitney operators were reimbursed for their fares. Parking revenues from Kezar Stadium and the Concourse could be used for this purpose. The Police Commission would need to approve the service and rates under a Park request. The Board of Supervisors would need to approve the new shuttle route.

SELECTION OF A PREFERRED ALTERNATIVE

In June 1983, three alternative draft transportation plans were presented to help the Park Commission determine the best series of possible actions to carry out their Park Plan policies. Each alternative presented a comprehensive set of transportation improvement actions addressing issues of circulation, parking, transit, shuttle system and safety improvements. The alternatives varied in their objectives, the type and degree of change recommended, and the cost of implementation. The degree of change and costs of implementation increased progressively from the first to the third alternative.

The Alternatives Report has since been reviewed by the Park Commissioners, Park staff, and the Technical Committee, on which there are representatives from different City departments and public interest groups. Most reviewers submitted comments indicating which actions within each alternative they supported and the reasons for such support. A summary of these comments and responses is available from the Recreation and Parks Department under separate cover. Based on these comments and further discussion with Park staff, a Preferred Alternative was prepared.

REFINEMENT OF THE PREFERRED ALTERNATIVE

The Preferred Alternative was presented for preliminary review and discussion by the Parks and Planning Committee. The suggestions and reaction provided by the Planning Committee helped guide the consultant in the preparation of the Draft Park Transportation Plan that is being presented to the public during October 1983. After submission of the Draft Transportation Plan to the general public, the public will be able to present their comments on the Plan at a hearing before the Parks and Planning Committee of the Recreation and Park Commission. The Parks and Planning Committee will review the comments and make recommendations for revisions of the Plan. The Committee will then recommend submission of the revised Plan to the full Recreation and Park Commission for their review and adoption in December 1983.

PHASING OF TRANSPORTATION ACTIONS

The various actions recommended in the Draft Transportation Plan are grouped into two time phases: short-term and long-term. Short term actions are those that can be implemented immediately upon adoption of the Draft Transportation Plan, subject to budgetary constraints. Several of the actions are first steps in implementing long-term components of the Plan. Several of these actions are established as demonstration projects, designed to test and determine whether the long term components are practical or feasible. For example, a demonstration shuttle program for peak weekends and special events is suggested to determine if it is a financially prudent, long-term transit solution for Park visitors.

Long-term actions are so categorized because they are either expensive and require longer-term financial phasing, or because they are tied to successful implementation of short-term actions. The exact timing of long-term actions will depend on availability of financial sources. It will also depend on whether short-term components are successful in achieving the various Plan policies. For example, the construction of the Highway 1/Crossover Drive undercrossing at South Drive will depend, in part, on the availability of the estimated $1.0 million needed to pay for the improvement.

CHARACTERISTICS OF THE DRAFT TRANSPORTATION PLAN

The Draft Transportation Plan is specifically designed to carry out objectives and policies of the Golden Gate Park Plan adopted in 1979. The primary transportation objective and policies in the Plan that are used in this study are:

Objective IV -- Minimize Vehicular Traffic

Policy A -- **Restrict non-recreational traffic to designated Park roadways in a manner that fully separates business, shopping, and commute traffic from the Park experience.**

Policy B -- **Reduce the number of Park roadways**

Policy C -- Provide for the gradual implementation of a transport system for the Park which would be

integrated with public transit and recreational transport systems of the Golden Gate National Recreation Area.

Policy D -- **Encourage the use of public transit for recreational travel to Golden Gate Park and adjoining recreation areas.**

Policy E -- **Regulate tour vehicles, (This was not addressed in this study since a designated tour vehicle route has been been adopted by the Recreation and Park Commission).**

The Recreation and Park Department planning staff has prepared an amended Transportation Objective and two additional policies for inclusion in the Park Plan. The two new policies, which would need to be adopted by the Park Commission, are of particular importance to this study as they would provide the policy framework for several of the recommended transportation actions. Objective IV, and its amended sections (underlined) are as follows:

OBJECTIVE IV
CREATE AND MAINTAIN A PARK-WIDE SYSTEM OF RECREATIONAL ROADWAYS, PATHWAYS, AND TRAILS; MINIMIZE VEHICULAR TRAFFIC

Management of Golden Gate Park's circulation system should, as a primary goal, create and maintain a system of recreational roadways where the order of priority should be to accomodate pedestrians, cyclists, equestrians, and slow pleasure driving. To accomoplish this objective, policies to reduce park automobile traffic, particularly through traffic, and to gradually eliminate the private automobile as the primary mode of internal Park traffic are desirable. Reduction of Park automobile traffic will necessitate changes in established driving patterns within the Park and adjoining neighborhoods. A well-financed internal Park transport system should be designed to effectively and pleasantly convey the Park visitor. Gradual, carefully planned and phased implementation, coordinated with the Department of Public Works and other agencies, will create a recreational roadway, pathway, and trail system that will improve the enjoyment and safety of the Park visitor, protect the Park's environment, and reduce impacts on adjacent neighborhoods. Measures taken to minimize vehicular traffic within the Park should be in accord with the objectives of the Comprehensive Plan of the City of San Francisco.

The proposed new policies are:

POLICY F

Provide a pedestrian circulation system which promotes pedestrian use, enjoyment and safety.

1. Pedestrian enjoyment and safety require separation of footpaths from roadways, grade separation of footpaths from roadways in heavily trafficked areas, and low speed limits for all vehicles. Guidelines and design criteria should be developed for improved pedestrian use and safety.

2. Pedestrian entrance ways to the Park, and to activity areas should be thoughtfully designed to invite use and promote safety.

POLICY G

Provide for the safe and convenient use of the bicycle as a means of recreation and transportation within Golden Gate Park; provide continuity with the City Bikeways Plan.

1. Where roadway widths allow, Class III bicycle lanes, which share existing roadways with other vehicles, should be considered.

2. Bicycle use should be encouraged through provision of secure parking facilities at activity centers.

3. Bicycle pathways separated from other transportation modes should emphasize recreational use and safety.

ACTIONS IN THE DRAFT TRANSPORTATION PLAN

The recommended actions in the Draft Transportation Plan are listed under the Plan policies they will help implement. In this manner the reader will be able to relate recommended actions to adopted policies. The transportation and financial impacts of the various actions are indicated directly under each action to help the reader understand the implication of carrying out the particular plan action. Table 1 presents a summary of the costs of the actions contained in the Transportation Plan. Potential funding sources for implementation may include:

- The annual City of San Francisco general budget
- The annual City of San Francisco Capital Improvement budget
- The Furhman Bequest Fund: "For the Further Adornment of Golden Gate Park"
- The federal Transportation Development Account, Article III, administered by the Metropolitan Transportation Commission for bicycle and pedestrian projects.
- The Surface Transportation Act, Section 217.
- State Gas Tax Monies provided under SB 215.

Table 1

COST SUMMARY OF DRAFT TRANSPORTATION PLAN

SHORT-TERM ACTIONS

Action	Description	Implementation Cost($)
A-1	Prohibit left turns from Kezar Drive.	500
A-2	Develop cul-de-sac on Conservatory Drive East.	27,000
A-3	Close JFK Drive on Saturdays and holidays.	37,000
A-4	Restrict left turns from South Drive to Crossover Drive during p.m. periods.	1,000
A-5	Design undercrossing of Highway 1/ Crossover Drive at South Drive.	150,000
A-6	Design undercrossing of Kezar Drive at South Drive and Arguello Blvd.	150,000
A-7	Close Chain of Lakes Drive West, remove asphalt, and relandscape.	25,000[a]
A-8	Cul-de-sac Chain of Lakes Drive East at North Lake Triangle and South Drive, remove unneeded portions of roadway.	10,500
B-1	Permanently close 6th Avenue, remove asphalt and relandscape.	10,000
B-2	Close 7th Avenue, remove asphalt and relandscape.	2,000[a]
B-3	Close 30th Avenue, remove asphalt and relandscape (if Action A-8 is not implemented).	2,500[a]
B-4	Convert Middle Drive West to two cul-de-sacs at midpoint, erect bollards.	55,000
B-5	Convert 47th Avenue to cul-de-sac (if Action A-8 is not implemented).	20,000
B-6	Create cul-de-sac on Spreckels Lake Drive.	20,000

---

[a] costs for irrigation and landscaping may vary

Table 1 (cont.)

Action	Description	Implementation Cost ($)
C-1	Implement priced parking in Concourse.	Undetermined
C-2	Develop demonstration shuttle program in East Park.	28,000 to 48,000
C-3	Redesign existing Kezar Stadium Parking Lots.	7,500
C-4	Realign Arguello Blvd. to South Drive at Kezar Drive.	40,000
D-1	Install Golden Gate Park destination signs or flags on Muni buses.	Minimal
D-2	Design transit portal/visitor drop-off area on Fulton Street.	1,600 to 8,000
F-1	Implement park-wide safety improvements (See Appendix A).	Variable
F-2	Modify intersection of Middle Drive East and Kennedy Drive.	10,500
F-3	Prohibit left turns from Kezar Drive to Waller and Waller to Kezar Drive.	1,000
F-4	Create a three-way stop intersection at Kennedy Drive and the South Fork of Kennedy Drive.	--[c]
F-5	Implement rechannelization of Kennedy Drive at 8th Avenue.	5,700
F-6	Design realignment of 8th Avenue to Tea Garden/Concourse Drives.	35,000
F-7	Design pedestrian overcrossing of Kezar Drive.	130,000
F-8	Design pedestrian overcrossing of Park Presidio By-Pass.	140,000

---

[c] no financial impact

Table 1 (cont.)

Action	Description	Implementation Costs($)
G-1	Provide travel way continuity between park pathways and City Bikeways Plan.	--[b]
G-2	Develop bike lanes on Kennedy Drive.	--[b]
G-3	Design a pedestrian and bicycle undercrossing of Chain of Lakes Drive East (If Action A-8 is not implemented).	30,000
G-4	Provide secure bike parking facilities at public activity centers.	--[b]
LONG-TERM ACTIONS		
A-9	Construct undercrossing of Highway 1/ Crossover Drive at South Drive.	1.0 million
A-10	Construct undercrossing of Kezar Drive at South Drive and Arguello Blvd.	1.0 million
C-5	Design and implement a West Park Shuttle system (if East Park System is successful).	50,000
C-6	Renovate existing Kezar Stadium parking areas.	30,000
D-3	Construct transit portal/visitor drop off area on Fulton Street near 8th Avenue.	8,000 to 50,000
F-9	Construct realignment of 8th Avenue to Tea Garden/Concourse Drives.	350,000
F-10	Construct pedestrian overcrossing of Kezar Drive.	645,000
F-11	Construct pedestrian overcrossing of Park Presidio By-Pass.	685,000
G-5	Construct pedestrian and bicycle undercrossing of Chain of Lakes Drive East.	150,000

---

[b] general impacts cannot be determined at this time

PLAN POLICY A -- RESTRICT NON-RECREATIONAL TRAFFIC TO DESIGNATED PARK ROADWAYS

SHORT-TERM ACTIONS

Action A-1 (East Park) -- Prohibit left turns from Kezar to J.F. Kennedy Drive at all times.

Transportation Impact: Alleviation of traffic congestion; reduction in traffic accident potential through the elimination of merging movement conflicts; would divert approximately 50 cars during the p.m. peak hour.

Financial Impact: $500, signage and striping.

Action A-2 (East Park) -- Develop a cul-de-sac on Conservatory Drive East, remove roadway between Arguello Blvd. and cul-de-sac, retain two-way operation on Arguello Boulevard entrance and Conservatory Drive West.

Transportation Impact: Elimination of through traffic on Conservatory Drive East; improved traffic safety through elimination of hazardous turning movements to/from Conservatory Drive East and Arguello Boulevard; would divert up to 150 cars to Conservatory Drive West during p.m. peak hour.

Financial Impact: $27,000, cul-de-sac, curbing, paving and asphalt removal.

Action A-3 (East Park) -- Close J.F.K. Drive on Saturdays and Holidays from Middle Drive East to Transverse Drive (concurrent with priced parking in the Concourse)

Transportation Impact: Diversion of Kennedy Drive traffic to Fulton Street, Lincoln Way, Stanyan Street, Crossover Drive and other park roads; provides Concourse parking on Saturdays, Sundays, and national holidays. This impact is similar to that of the current Sunday closure.

Financial Impact: $37,000 (annual labor only, for intersection monitors).

Action A-4 (East Park) -- Restrict left turns from South drive to Highway 1/Crossover Drive during weekday p.m. peak periods.

Transportation Impact: Would divert up to 200 southbound cars and 300 northbound cars during the p.m. peak hour. The great majority of this diversion would be commute traffic. During the short-term, traffic congestion may develop at 9th Avenue and Lincoln Way, and 25th Avenue at Lincoln Way due to diverted southbound commute traffic, and at Transverse Drive and Crossover Drive due to diverted northbound commute traffic. In the long term, drivers are expected to adjust their commute routes to arterials outside of the Park.

Financial Impact: $1,000, striping and signage.

Action A-5 (East Park)-- Design undercrossing of Highway 1/-Crossover Drive at South Drive.

Transportation Impact: No impact during design phase; potential impacts after construction are addressed in Long-term **Action A-9.**

Financial Impact: $150,000, design and engineering.

Action A-6 (East Park) -- Design undercrossing of Kezar Drive at South Drive and Arguello Boulevard.

Transportation Impact: No impact during design phase; potential impacts after construction are addressed in Long-term **Action A-10.**

Financial Impact: $150,000, design and engineering.

Action A-7 (West Park) -- Close Chain of Lakes Drive West, and connecting road to Chain of Lakes Drive East, remove asphalt, and re-landscape as natural pathway.

Transportation Impact: No significant impact, diverts less than 500 vehicles per day within the Park.

Financial Impact: $25,000 for asphalt removal and roadwork. Additional costs for irrigation and landscaping may vary.

Action A-8 (West Park) -- Consider closing Chain of Lakes Drive East to through traffic at Fulton Street and South Drive, creating cul-de-sacs, and diverting traffic to South Drive, Kennedy Drive and 47th Avenue.

Transportation Impact: Diverts approximately 9,000 vehicles per day (both directions)n from Chain of Lakes Drive East to South Drive, Kennedy Drive, 47th Avenue, and possibly 36th Avenue. Traffic volumes at 41st Avenue would be unchanged; however, traffic volumes at 47th Avenue and 36th Avenue could each increase by up to 2200 cars per day to produce daily traffic volumes of 2700 cars at 47th Avenue, and 3510 cars at 36th Avenue, respectively. If implemented, the following mitigation measures may be required to reduce traffic impacts:

- Installation of a traffic signal at 47th Avenue and Fulton Street.
- Retaining the 30th Avenue roadway as an access road (see **Action B-3**). If 30th Avenue is kept open, **Action A-8** would only increase traffic at 47th Avenue to 2000 cars; 36th Avenue to 2800 cars; and 30th Avenue to 2900 cars.

Despite these potential impacts, it is possible that the diversion of commute traffic from a low capacity park roadway and environmentally sensitive park area, to higher capacity roadways (South and Kennedy Drives) will produce a net benefit for park users.

Financial Impact: $10,500, includes roadwork, signage.

LONG-TERM ACTIONS

Action A-9 (East Park) -- Construct undercrossing of Highway 1/Crossover Drive at South Drive.

Transportation Impact: Separation of through traffic from park traffic; possible traffic congestion at 9th and 25th Avenues and Lincoln Way, and Transverse Drive at Crossover Drive during short-term; no significant long-term impacts. (See **Action A-4**).

Financial Impact: $1.0 million construction cost.

Action A-10 (East Park) -- Construct undercrossing of Kezar Drive at South Drive and Arguello Boulevard.

Transportation Impact: Separation of through traffic from park traffic; links Kezar Stadium grounds to park proper; would divert approximately 150 westbound cars and 125 eastbound cars to Frederick Street during p.m. peak hour.

Financial Impact: $1.0 million construction cost.

PLAN POLICY B -- REDUCE THE NUMBER OF PARK ROADWAYS

SHORT-TERM ACTIONS

Action B-1 (East Park) -- Permanently close 6th Avenue at Fulton Street. (6th Avenue is currently closed under trial closure)

Transportation Impact: No significant impact; a Negative Declaration was issued by the San Francisco Department of City Planning on June 26, 1981.

Financial Impact: $10,000 (asphalt removal and landscaping).

Action B-2 (East Park) -- Permanently close 7th at Lincoln Way, remove asphalt and landscape as park grounds.

Transportation Impact: Diversion of 1200 vehicles per day to 9th Avenue and South Drive/Kezar Drive.

Financial Impact: $2,000 (asphalt removal, additional costs for irrigation and landscaping may vary).

Action B-3 (West Park) -- Close 30th Avenue at Fulton Street; remove roadway and landscape. (If **Action A-8** is not implemented)

Transportation Impact: Diversion of 1400 vehicles per day. Southbound traffic (700 cars) diverted to 36th Avenue and Transverse Drive; Northbound traffic (700 cars) diverted to 43rd Avenue and 36th Avenue. No significant traffic impact.

Financial Impact: $2,500, (asphalt removal, additional costs for irrigation and landscaping).

Action B-4 (West Park) -- Convert Middle Drive West to cul-de-sacs at the midpoint of the road near existing light standards; retain roadway for parking; and construct a rustic stairway to Old Speedway Meadow.

Transportation Impact: Eliminates through access to South Drive and Transverse Drive; creates parking areas; and improves pedestrian access; would divert approximately 158 cars (through traffic on Middle Drive West) during p.m. peak hour to intersection of South and Transverse Drives. This would increase westbound traffic at this intersection by 110 cars, and eastbound traffic by 48 cars, and possibly increase existing p.m. peak traffic congestion.

Financial Impact: $55,000 (includes development of cul-de-sacs, curbing, pavement, bollards).

Action B-5 (West Park) -- Convert 47th Avenue to a cul- de-sac north of Kennedy Drive; allow vehicle access to Golf Course and Archery Range from Fulton Street (if **Action A-8** is not implemented).

Transportation Impact: Eliminates through access to Fulton Street; slightly impairs accessibility to Golf Course and Archery range from within the Park, allows park access only from Fulton Street; would divert total daily traffic of approximately 650 cars to The Great Highway or 43rd Avenue.

Financial Impact: $5,000 for asphalt removal, signage, and bollards.

Action B-6 (West Park) -- Create a cul-de-sac on Spreckels Lake Drive east of Spreckels Lake, remove and relandscape remaining roadway west of intersection.

Transportation Impact: Eliminates through access to 30th Avenue; would divert less than 400 cars per day back to 36th Avenue.

Financial Impact: $20,000, for cul-de-sac and asphalt removal (additional costs for irrigation and landscaping may vary).

PLAN POLICY C -- PROVIDE FOR THE GRADUAL IMPLEMENTATION OF A TRANSPORT SYSTEM FOR THE PARK WHICH WOULD BE INTEGRATED WITH PUBLIC TRANSIT AND RECREATIONAL TRANSPORT SYSTEMS OF THE GOLDEN GATE NATIONAL RECREATION AREA

SHORT-TERM ACTIONS

Action C-1 (East Park) -- Implement priced parking in existing Concourse parking areas and use revenues to help offset operating costs of shuttle program and/or implement circulation improvement measures.

> Transportation Impact: Increases parking turnover rate in Concourse; could result in increased parking demand for Concourse parking during peak visiting periods, resulting in possible traffic congestion on South Drive between Concourse Drive and Lincoln Way.
>
> Financial Impact: Parking fees charged to park visitors; undetermined implementation and management cost to Recreation Park Department; could generate revenues for the Park in the range of $14,000 to $28,000 per season.

Action C-2 (East Park) -- Develop a demonstration shuttle program for peak weekends and special events (operating from Kezar Stadium grounds) to serve mainly the Concourse, Conservatory, and Hall of Flowers.

> Transportation Impact: Would require development of more parking at Kezar Stadium; introduces shuttle bus traffic onto park roads; possible reduction in east park traffic and neighborhood parking infringement.
>
> Financial Impact: Operating cost range of $28,800 to $48,000 for summer season only. If jitney vans used, costs to be borne by shuttle operator, with partial operating subsidy from Concourse and Kezar Stadium parking revenues.

Action C-3 (East Park) -- Re-design existing parking areas of the Kezar Stadium grounds to develop an upgraded and expanded parking lot for general park use, or for use in support of a park shuttle.

> Transportation Impact: No impact during design phase; potential impacts after construction are addressed in Long-term **Action C-6.**
>
> Financial Impact: $7,500 (for designing and re-striping of existing parking lots only).

Action C-4 (East Park) -- Realign Arguello Boulevard to South Drive/Kezar Drive to provide direct access for parking at Kezar Stadium (concurrent with demonstration shuttle program).

Transportation Impact: Improved vehicle access to Kezar Stadium grounds.

Financial Impact: $40,000 for road work, landscaping, and possible modification to traffic signal.

LONG-TERM ACTIONS

Action C-5 (West Park) -- Design and implement a West Park shuttle system (if demand for service is proven and shuttle in East Park is successful).

Transportation Impact: Possible reduction in traffic and parking demand in west Park.

Financial Impact: $50,000 for design and first year of operation.

Action C-6 (East Park) -- Redesign Kezar Stadium grounds to develop an upgraded and expanded parking facility for general park use or shuttle system; may be developed in conjunction with general renovation of Kezar Stadium.

Transportation Impact: Possible reduction in parking demand within the park; would increase parking supply at Kezar Stadium from 300 spaces to 550 spaces; increased traffic on access streets to the stadium e.g. Stanyan and Frederick Streets.

Financial Impact: $30,000, design and restriping.

PLAN POLICY D -- ENCOURAGE THE USE OF PUBLIC TRANSIT FOR RECREATIONAL TRAVEL TO GOLDEN GATE PARK AND ADJOINING RECREATION AREAS

SHORT-TERM ACTIONS

Action D-1 (East Park) -- Install "Golden Gate Park" destination signs or flags on Muni buses serving the Park e.g. 5-Fulton and 21 Hayes.

Transportation Impact: Possible increase in transit usage and reduction in auto dependency for park visitors.

Financial Impact: Minimal.

Action D-2 (East Park) -- Design transit portal/visitor drop off area on Fulton Street near 8th Avenue.

Transportation Impact: No impact during design phase.

Financial Impact: $1,600 - $8,000, depending on method of implementation; see **Action D-3.**

LONG-TERM ACTIONS

Action D-3 (East Park) -- Construct transit portal/visitor drop off on Fulton Street near 8th Avenue.

Transportation Impact: Possible increase in public transit usage for park visitors with destinations in the Museum/Concourse.

Financial Impact: $8,000 to $50,000, depending on extent of facilities constructed. Portal could be simple bus shelters (developed under the Muni/PUC Transit Shelter Program), or a more elaborate facility with pull-over bus bays, and pedestrian pathways to the Concourse.

PROPOSED NEW PLAN POLICY F -- PROVIDE A PEDESTRIAN CIRCULATION SYSTEM WHICH PROMOTES PEDESTRIAN USE, ENJOYMENT AND SAFETY

SHORT-TERM ACTIONS

Action F-1 (East and West Park) -- Implement park-wide safety improvements under the supervision of the Department of Public Works, Division of Traffic Engineering. See Appendix A.

Transportation Impact: Reduction in traffic accidents in the Park.

Financial Impact: Variable, depends on extent of implementation, cost estimates are provided in Appendix A.

Action F-2 (East Park) -- Modify intersection of Middle Drive East and J.F. Kennedy Drive to reduce pavement area of intersection and design pedestrian crosswalks to promote visibility and safety. Create a three-way stop intersection.

Transportation Impact: Possible reduction in traffic accident potential, improved pedestrian safety conditions.

Financial Impact: $10,500, for asphalt removal and curbing; additional costs for irrigation and landscaping may vary.

Action F-3 (East Park) -- Prohibit left turns from Kezar Drive to Waller Street, and merging movements from Waller Street westbound to Kezar Drive.

Transportation Impact: Possible reduction in accidents; diverts approximately 2,000 westbound cars to Frederick Street, and 900 eastbound cars to 7th Avenue at Lincoln Way, on an average weekday.

Financial Impact: $1,000, for signage and striping.

Action F-4 (East Park) -- Create a three-way stop at the intersection of Kennedy Drive and the South Fork of Kennedy Drive.

Transportation Impact: Reduction in vehicle speeds within proximity of intersection; improves pedestrian safety at crosswalk.

Financial Impact: $1,000, signage and pavement messages.

Action F-5 (East Park) -- Implement rechannelization designed by Department of Public Works for Kennedy Drive at 8th Avenue and Tea Garden/Concourse Drives.

Transportation Impact: Improved traffic circulation and safety.

Financial Impact: $5,700, striping and signage.

Action F-6 (East Park) -- If DPW rechannelization is not successful in improving traffic circulation, design realignment of 8th Avenue to Tea Garden/Concourse Drives to form a common four-way intersection with Kennedy Drive.

Transportation Impact: Improved vehicle access and egress to the Museum/Concourse.

Financial Impact: $35,000, design and engineering.

Action F-7 (East Park) -- Design a pedestrian overcrossing of Kezar Drive near Sharon Meadow.

Transportation Impact: No impact during design phase; impact after construction is addressed in Long-Term **Action F-10**.

Financial Impact: $130,000, design and engineering.

Action F-8 (East Park) -- Design a pedestrian overcrossing of Park Presidio By-Pass between 17th and 19th Avenues at Fulton Street.

Transportation Impact: No impact during design phase; impact after construction is addressed in Long-Term **Action F-11**.

Financial Impact: $140,000, design and engineering.

LONG-TERM ACTIONS

Action F-9 (East Park) -- Construct realignment of 8th Avenue to Tea Garden/Concourse Drives to form a common four-way intersection with Kennedy Drive.

Transportation Impact: Improved vehicle access/egress to the Museum/Concourse.

Financial Impact: $350,000, for road work, paving, curbing, landscaping.

Action F-10 (East Park) -- Construct a pedestrian overcrossing of Kezar Drive near Sharon Meadow.

Transportation Impact: Improved pedestrian access to Sharon Meadow from East Park border, improved safety through separation of pedestrian traffic from vehicle traffic; links East Park section to Park proper.

Financial Impact: $645,000, construction cost.

Action F-11 (East Park) -- Construct a pedestrian overcrossing of Park Presidio By-Pass between 17th and 19th Avenues at Fulton Street.

Transportation Impact: Creation of safe pedestrian access route to Park proper from park area south of Fulton Street, between 25th Avenue and Park Presidio Boulevard.

Financial Impact: $685,000, construction cost.

PROPOSED NEW POLICY G -- PROVIDE FOR THE SAFE AND CONVENIENT USE OF THE BICYCLE AS A MEANS OF RECREATION AND TRANSPORTATION WITHIN GOLDEN GATE PARK, PROVIDE CONTINUITY WITH CITY BIKEWAYS PLAN

SHORT-TERM ACTIONS

Action G-1 (Park-wide) -- Provide travelway continuity between internal park bikepaths and bikeways of the adopted City Bikeways Plan.

Transportation Impact: Promotes cycling as a transportation mode in and through the Park.

Financial Impact: To be determined. Bike path design and implementation could possibly be funded as part of the MTC Bike Grant Porgram, under federal TDA Article 111, and the Surface Transportation Act, Section 217, and State Gas Tax funds (SB 215).

Action G-2 (East and West Park) -- Develop bike lanes on JFK Drive.

Transportation Impact: Improved safety conditions for recreational bicyclists.

Financial Impact: To be determined. Bike path design and implementation could possibly be funded as part of the Federal Transportation Development Account, the Surface Transportation Act, or State Gas Tax Funds (SB 215).

Action G-3 (West Park) -- Design a pedestrian and bicycle undercrossing that is consistent with the park character at Chain of Lakes Drive East near the Bercut Equitation Field. (If **Action A-8** is not implemented)

Transportation Impact: No impact during design phase.

Financial Impact: $30,000, design and engineering

Action G-4 (Park-Wide) -- Provide secure bike parking facility at Park activity centers.

Transportation Impact: Encourages bicycling as a transportation mode to and within Golden Gate Park

Financial Impact: To be determined. Funding to come from MTC Bike Grant Program and Federal Surface Transportation Act, Section 217.

LONG-TERM ACTIONS

Action G-5 (West Park) -- Construct a pedestrian and bicycle undercrossing at Chain of Lakes Drive East near the Bercut Equitation Field (If **Action A-8** is not implemented).

Transportation Impact: Separates park auto traffic from bike and pedestrian traffic, improves safety conditions.

Financial Impact: $150,000, construction cost.

APPENDIX A

SAFETY IMPROVEMENT PROGRAM

APPENDIX A

ASSESSMENT OF HIGH ACCIDENT RATE PARK LOCATIONS AND RECOMMENDED SAFETY IMPROVEMENTS

INTRODUCTION

This appendix contains an assessment of high accident rate locations within the Park. Overall, the number of vehicle accidents at any specific site within the Park is small, thereby complicating efforts to identify high priority sites. Nevertheless, it was decided that accident rates would be used as a minimum basis for selection of safety problem locations. The sites addressed below were selected as locations most needing immediate traffic safety improvements. Table C-1 identifies the accident frequencies of these intersections.

TABLE C-1
PARK LOCATIONS WITH HIGHEST ACCIDENT FREQUENCIES

Location	Accident Rate MEV*
1. Middle Drive West on South Drive	4.64
2. South Drive at Middle Drive East	4.08
3. Kezar Drive at Waller Street	2.11
4. Crossover Drive at Park Presidio By-pass	2.02
5. Chain of Lakes Drive East at South Drive	1.38
6. South Drive at Sunset Boulevard	1.19
7. Kennedy Drive at 36th Avenue	1.18
8. South Drive at Crossover Drive	1.07
9. Kezar Drive at South Drive	1.03
10. South Drive at Stow Lake Drive	0.96

* Million Entering Vehicles (MEV)

Site 1

MIDDLE DRIVE WEST AT SOUTH DRIVE

Conditions

Existing control - "STOP" sign on Middle Drive West. 1976-1981 reported accidents = 28. Predominant accident type - right turn collisions.

Narrative

South Drive carries large volumes of daily traffic, often at high speeds.

The visibility of the intersection for eastbound traffic on South Drive is impaired by the road curvature, and for westbound traffic is impaired by shrubbery and the acute angle of the intersection. Similarly, sight distance from Middle Drive is obscured to the east by shrubbery and to the west by the road curvature. One bicycle and three pedestrian accidents were reported during the analysis period. Nighttime accidents accounted for 26% of the total collisions.

Recommendations

1. Trim or remove shrubbery on South Drive east of the intersection to improve sight distance. (Cost $50.00)

2. Install reflective pavement markers on Middle Drive and South Drive. (Cost $150.00)

3. Consider installing a "SLOW" warning sign on South Drive approaches to the intersection. (Cost $300.00)

Site 2

SOUTH DRIVE AT MIDDLE DRIVE EAST

Conditions

Existing control - "STOP" sign on Middle Drive East. 1976-81 reported accidents - 10. Predominant accident type - sideswipe of parked cars.

Narrative

This intersection is often congested at peak periods due to the activities at the Museum/Concourse and Hall of Flowers. Curbside parking is prohibited on portions of the south side of South Drive. Curbside parking is allowed on the north side of South Drive. Sight distance of oncoming vehicles can be restricted for drivers on Middle Drive East. Due to parked vehicles, sideswipe and head-on collisions have occurred at this intersection.

Recommendations

1. Prohibit curbside parking for a distance of at least thirty feet (east and west of Middle Drive East) along the northside of South Drive (Cost $30.00)

Site 3

KEZAR DRIVE AT WALLER STREET

Conditions

Existing control - "STOP" sign on Waller Street. 1976-1981 reported accidents - 90. Predominant accident type - sideswipe of parked cars.

Narrative

Kezar Drive eastbound narrows from two lanes to one lane at Waller Street. The intersection is channelized. This intersection would benefit from a thorough traffic engineering evaluation which studies possible widening of Kezar Drive eastbound to two lanes between Waller Street and Kennedy Drive. The large volumes of traffic, road curvature, narrow traffic lanes and restricted sight distance contribute to the accident history of this intersection.

Recommendations

1. Install reflective pavement markers along the lane lines and center line. (Cost $1,000.00)

2. Remove curbside parking along Kezar Drive eastbound and westbound for a distance of 100 feet west of the intersection with Waller Street. (Cost $500.00)

3. Consider installing a "THRU TRAFFIC MERGE LEFT" sign (W74) on eastbound Kezar Drive prior to the 150 feet of solid white line. (Cost $125.00)

4. Consider installing two flashing yellow beacons at the intersection facing eastbound and westbound drivers on Kezar Drive. (Cost $20,000.00)

5. Consider prohibiting left turns from Kezar Drive into Waller Street and from Waller Street into Kezar Drive. (Cost $1,000.00)

6. Consider painting median and island white to improve nighttime visibility. (Cost $100.00)

Site 4

CROSSOVER DRIVE AT PARK PRESIDIO BY-PASS

Conditions

Existing control: Traffic Signal. 1976-1981 reported accidents: 66. Predominant accident types: left turn, stopped in traffic, rear end and fixed object accidents

Narrative

Park Presidio By-pass is State Highway 1, and therefore is subject to corrective measures developed and implemented by the State Department of Transportation. This intersection is characterized by high vehicle speeds, narrower than normal traffic lanes and lies at the terminus of a sharp curve on Park Presidio By-pass. An impact attenuator, warning signs and other corrective measure are already in place.

Recommendations

1. Dialogue between the City and Caltrans should be coordinated with the goal of developing long term improvement alternatives for this roadway segment.

Site 5

CHAIN OF LAKES DRIVE EAST AT SOUTH DRIVE

Conditions

Existing control - four way "STOP" signs. 1976-1981 reported accidents: 14. Predominant accident type - head on and sideswipe collisions.

Narrative

Sight distance from all approaches of this intersection is reasonably good. Disobedience of the "STOP" sign is the primary cause of accidents. This site could benefit from installation of speed humps or rumble strips on the South Drive approaches to slow vehicle speeds prior to the intersection.

Recommendations

1. Install "STOP AHEAD" warning signs on all intersection approaches. (Cost $500.00)
2. Install speed humps or rumble strips on South Drive approaches to intersection. (Cost $2,400.00 - $5,600.00)
3. Paint "STOP" messages to supplement the STOP signs on all intersection approaches. (Cost $300.00)
4. Conduct selective enforcement during peak periods to reduce the incidence of "STOP" sign violations. (Cost n/a)

Site 6

SOUTH DRIVE AT SUNSET BOULEVARD

Conditions

Existing control - Three way "STOP". 1976-1981 reported accidents - 23. Predominant accident type - Bicycle and sideswipe accidents.

Narrative

Sight distance at this intersection is reasonably good. Excessive vehicle speeds and disobedience of "STOP" signs are contributing factors to accidents. In addition to bike and sideswipe accidents, head-on collisions and collisions with fixed objects have also occurred.

Recommendations

1. Re-route existing bike path to a southerly crossing at 41st Avenue. (Cost $100.00)

2. Consider installation of "STOP AHEAD" warning signs for South Drive. (Cost $250.00)

3. Consider installation of speed humps or rumble strips to reduce vehicle speeds. (Cost $2,400.00 - $5,600.00)

4. Consider prohibiting curb parking within fifty feet of intersection along South Drive and Sunset Boulevard. (Cost $250.00)

Site 7

KENNEDY DRIVE AT 36TH AVENUE

Conditions

Existing Control - none. 1976-1981 reported accidents - 12. Predominant accident types - bicycle, pedestrian and sideswipe accidents.

Narrative

Prior to 36th Avenue, Kennedy Drive splits into a one-way roadway by-passing the Rhododendron Island. This roadway segment is characterized by high pedestrian and cyclist volumes at Spreckels Lake, Lindley Meadow and the Park Stadium. There are two pedestrian crosswalks, one on 36th Avenue and one on Kennedy Drive. Sight distance is often restricted by parked vehicles along Kennedy Drive and by vegetation on the Rhododendron Island.

Recommendations

1. Prohibit parking on the north side of Kennedy Drive for a distance of thirty feet east and west of the crosswalk. (Cost $75.00)

2. Repaint the "SLOW XING" pavement messages on eastbound Kennedy Drive. Paint new "SLOW XING" message on westbound Kennedy Drive. (Cost $75.00)

3. Consider installing speed humps or rumble stops on Kennedy Drive approaches to intersection. (Cost $2,400.00 - $5,600.00)

Site 8

SOUTH DRIVE AT CROSSOVER DRIVE

Conditions

Existing Control - four way, two phase traffic signal. 1976-1981 reported accidents - 18. Predominant accident types - stopped in traffic, sideswipe and fixed object accidents.

Narrative

This section of Crossover Drive is State Highway 1. This intersection is a major conflict point between through traffic and park related traffic. The stopped in traffic accidents may be attributed to general recreational driver confusion and unfamiliarity with this major intersection.

Recommendations

1. Consider constructing a South Drive undercrossing of Crossover Drive to fully separate park traffic from through traffic. (Cost $1.0 million)
2. Restrict left turns from South Drive to Crossover Drive.
3. Dialogue between the City and Caltrans should be coordinated to develop alternative long term improvements.

Site 9

KEZAR DRIVE AT SOUTH DRIVE

Conditions

Existing control - two way, two phase traffic signal. 1976-1981 reported accidents - 44. Predominant accident types - sideswipe of parked vehicles, stopped in traffic and fixed object accidents.

Narrative

Kezar Drive is a major city arterial which passes through the southeast corner of the Park. South Drive intersects Kezar Drive at an acute angle, which can restrict sight distance from South Drive, particularly when curbside parking on Kezar Drive is at full occupancy. The intersection is fully channelized with raised islands.

Recommendations

1. Consider prohibiting curbside parking on the north and south sides of Kezar Drive at points where travel width or sight distance is restricted. (Cost $300.00)
2. Paint the noses of channelizing islands with a highly reflective white paint. (Cost $250.00)
3. Replace or install pavement markers to better delineate traffic lanes. (Cost $1,000.00)
4. Consider installing a "PARK ENTRANCE" information sign prior to South Drive to alleviate driver confusion.

Site 10

SOUTH DRIVE AT STOW LAKE DRIVE

Conditions

Existing control - none. 1976-1981 reported accidents - 16. Predominant accident types - sideswipe, right angle and collisions with parked vehicles.

Narrative

Stow Lake Drive is a one-way loop road encircling Stow Lake. The entrance and exit are provided at two points on South Drive. Sight distance for exiting vehicles is restricted by the curvature of South Drive, the angle of intersection, and by parked vehicles. For entering vehicles, visibility of on-coming vehicles is limited by vegetation and road curvature, thereby making left turn movements onto Stow Lake Drive potentially difficult. In addition to sideswipe and right angle collisions with parked vehicles, head-on accidents have also occurred.

Recommendations

1. To improve sight distance, prohibit curbside parking on the north side of South Drive for a distance of 75 feet east of the Stow Lake Drive exit, and for the 175 foot distance between the Stow Lake Drive entrance and exit.

2. Install a "STOP AHEAD" warning sign (W17) prior to intersection of Stow Lake Drive East (exit) with South Drive; install a STOP sign and supplemental "STOP" pavement message. (Cost $300.00)

3. Stripe a solid white limit line to better delineate the intersection of Stow Lake Drive East (exit) with South Drive. (Cost $50.00)